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RESEARCH ARTICLE

A new locality of *Saperda* (*Saperda*) *similis* (Coleoptera: Cerambycidae) in Bulgaria

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Abstract

A new locality of the rare species *Saperda* (*Saperda*) *similis* Laicharting (Coleoptera: Cerambycidae) was reported in Bulgaria. The species was reared from stems and branches of goat willow (*Salix caprea*), collected on 23.10.2024 in the land of Kosovo village at 1468 m a.s.l., Western Rhodopes. In laboratory conditions, three specimens emerged during the period 20 February - 4 March 2025. An old published record of *S. similis* (syn. *Saperda phoca* Frölich) was identified as *Phytoecia* (*Danilevskia*) *uncinata* (Redtenbacher).

Keywords

New record, longhorn beetle, *Salix caprea*, Western Rhodopes

Introduction

The Eurosiberian species *Saperda* (*Saperda*) *similis* Laicharting, 1784 (Coleoptera: Cerambycidae) is distributed throughout the entirety of Europe, Kazakhstan, North Asia (Ural, Western and Eastern Siberia, Ussuri-Primorsky Krai), Kyrgyzstan, Tajikistan, Uzbekistan, Mongolia, North China (Xinjiang) and North Korea (Cherepanov, 1991; Danilevsky, 2024). The species feeds on willows, tends to cause the greatest damage to the goat willow (*Salix caprea* L.) (Cherepanov, 1991).

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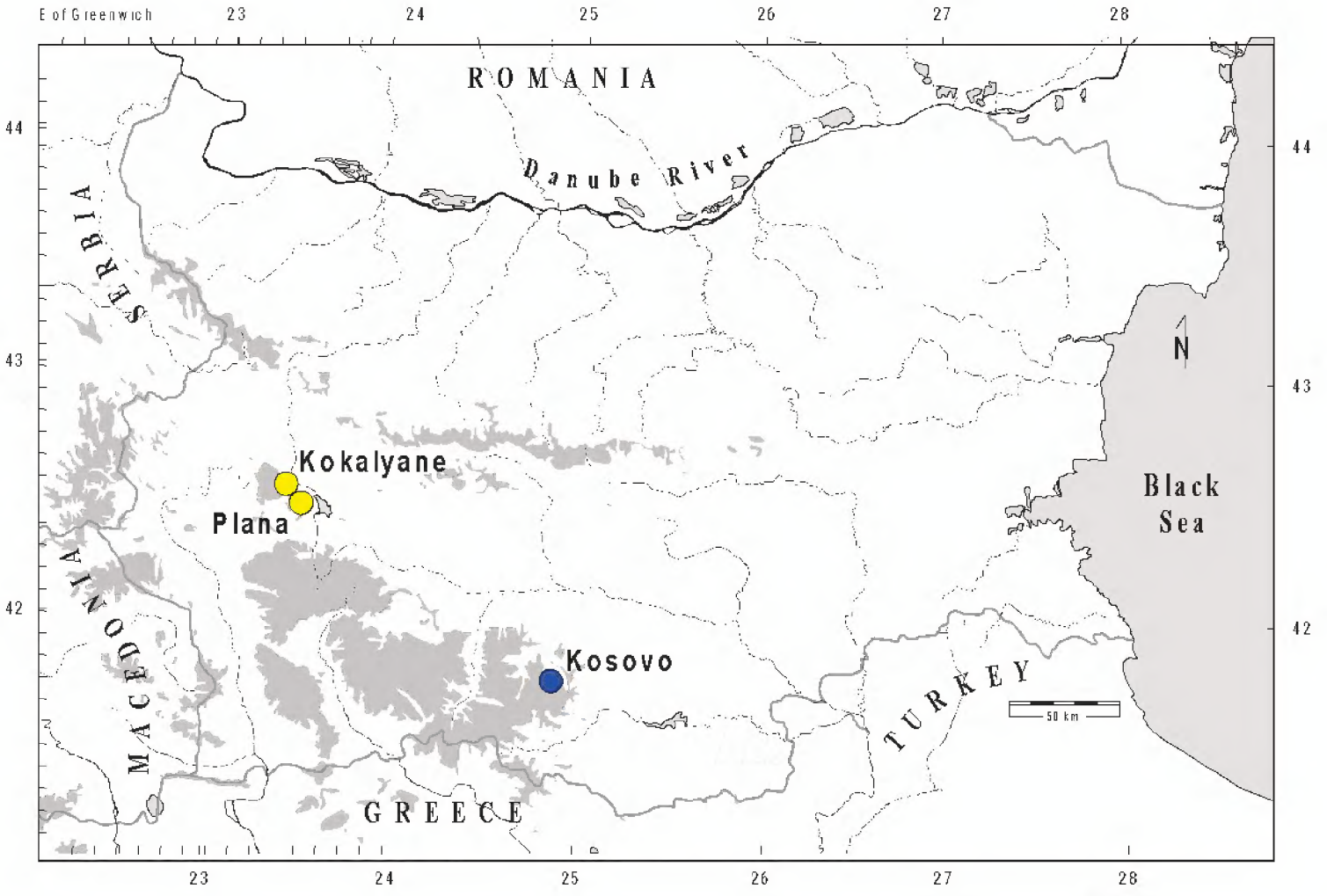

Fig. 1. Localities of *Saperda similis* in Bulgaria: yellow dot – previously known localities; blue dot – a new locality in Western Rhodopes

In Bulgaria, *S. similis* was found for the first time in 1999 (Georgiev, Samuelian, 2000). It was reared from stems and branches of goat willow (*Salix caprea*) collected in the valley of the Vedena River above Kokalyane village on Vitosha Mountain (Fig. 1). In 2002-2003, it was recorded in the same locality at 800 m a.s.l., and in 2003 – in the valley of the Planshtitsa River on Plana Mountain at 850 m a.s.l., in the land of Plana village (Georgiev et al., 2004) (Fig. 1). The distance between the two localities is about 3.5 km and that implies a stable population in this area. However, information about an earlier finding of *S. similis* was found in the entomological literature (reported as *Saperda phoca* Frölich, 1793 in the Razgrad region in Bulgaria) (Markovich, 1909).

The present work reports a new locality of *S. similis* in the Western Rhodopes in Bulgaria and information about our identification of the biological material in the entomological collection of teacher Andrey Markovich in the National Museum of Natural History in Sofia.

Material and methods

On 23 October 2024, samples of stems and branches of *Salix caprea* were collected on the territory of the State Forest Enterprise Asenovgrad, in the land of Kosovo village (41.915208°N, 24.662811°E, 1468 m a.s.l.).

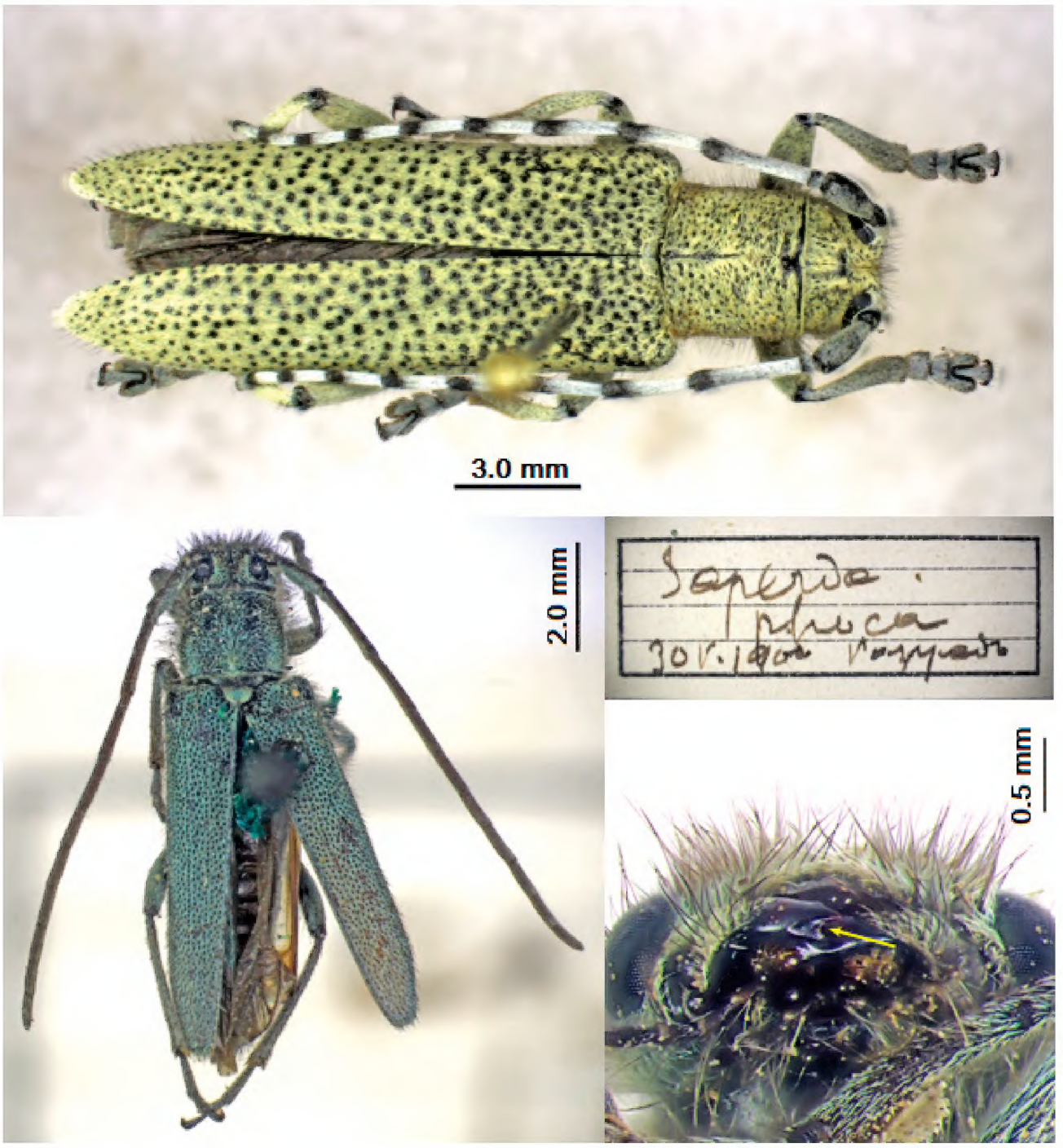

Fig. 2. A – *Saperda similis*; B – *Phytoecia coerulescens coerulescens*; C – *Saperda phoca* (original label of Andrey Markovich; D – apex of the mandible of *P. coerulescens coerulescens* (yellow arrow indicates the notch on the apex of right mandible)

The samples were transported to the entomological laboratory at the Forest Research Institute of the Bulgarian Academy of Sciences in Sofia. They were placed in plastic transparent boxes measuring 50 × 30 × 50 cm, at 22 °C. The samples were checked 2-3 times a month for the presence of emerged insects.

The adults of *Saperda similis* were identified using the keys of Cherepanov (1991) and Bense (1995).

The biological material was deposited in the entomological collection of the National Museum of Natural History in Sofia.

The entomological collection of Andrey Markovich is kept in the National Museum of Natural History. In this study, some of the collected longhorn beetles were examined and re-identified.

Digital photographs of the examined species were taken with a Canon EOS 2000D camera using an Olympus SZX10 binocular, then aligned and stitched with Helicon Focus Pro 7.0.2 software.

Results and discussion

During the period 20 February - 4 March 2025, three specimens (two males and one female) of *Saperda similis* were reared from stems and branches of *Salix caprea* collected in Western Rhodopes (Fig. 1, 2A).

In the collection of Andrey Markovich a single cerambycide specimen was found, identified as '*Saperda phoca*' (Fig. 2B, C). However, re-identification has shown that the specimen belongs to *Phytoecia* (*Opsilia*) *coerulescens coerulescens* (Scopoli, 1763) (Fig. 2C). It is to note that the apex of each mandible of *P. coerulescens coerulescens* has two spines (Fig. 2D), which is a diagnostic feature used to distinguish it from the closest representative of the genus – *Phytoecia* (*Danilevskia*) *uncinata* (Redtenbacher, 1842) whose apex of mandibles has one spine (Bense, 1995).

In conclusion, it should be noted that the earliest record from 1909 of *Saperda* (*Saperda*) *similis* in Bulgaria has been revised. In this study, a new (third) locality of the rare species was found in the Western Rhodopes.

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